

TECHNICAL DATA SHEET

EFIRON[®] Polymer Clad
Series

SPC-444



FOSPIA CO., LTD

53, Jiwon-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
Tel) +82-31-365-3680 Fax) +82-31-365-3681
<http://www.fospia.com>

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A. MATERIAL DESCRIPTION

EFIRON[®] SPC-444 coating is a radiation-curable acrylate useful for polymer cladding making processes. EFIRON[®] SPC-444 coating has suitable glass transition temperature, rapid cure property, non-yellowing, thermal resistance, high oxidative and hydrolytic (moisture) stability, which are required by optical fiber industry applications.

1. CURING CONDITION

Minimum UV dose of EFIRON[®] SPC-444 for complete cure is 1000 mJ/cm² under a nitrogen environment. However, the minimum dosage is heavily dependent upon the thickness of the PC layer.

2. STORAGE

EFIRON[®] SPC-444 polymer cladding coating can polymerize under improper storage conditions. Store materials away from direct sunlight and presence of oxidizing agents and free radicals. Storage temperature range is between 10°C to 30°C.

3. PRECAUTION

EFIRON[®] SPC-444 polymer cladding coating materials can cause skin and eye irritation after contact. Therefore, avoid direct contact with these materials. If contact occurs, immediately rinse affected areas copiously with water.

4. NOTES

The information contained herein is believed to be reliable but is not to be taken as representation, warranty or guarantee and customers are urged to make their own tests.

B. MATERIAL PROPERTIES

1. LIQUID

Viscosity	at 25 °C	5,000 cPs
Density	at 20 °C	1.52 g·cm ⁻³
Refractive Index	at 25°C, 589 nm	1.434
Surface Tension		In Testing

2. CURED

Refractive Index	at 852 nm	1.444
Glass Transition Temperature		
At Tan_delta Max		95 °C
Secant Modulus		
At 2.5% Strain		500 MPa(In Testing)
Tensile Strength at Break		25 MPa(In Testing)
Elongation at Break		10 %(In Testing)
Water Sensitivity (24 Hour, 50 °C)		
Weight Change		In testing
Extractable		In testing
Coefficient of Expansion		
Glassy Region		In testing
Rubbery Region		In testing
Shrinkage on Cure		<10.0 %

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